396Z

USER MANUAL

High Resolution IR Camera

Please read the instructions thoroughly before using the product.

467a_V0.9

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IMPORTANT SAFEGUARD

All lead-free products offered by the company comply with the requirements of the European law on the Restriction of Hazardous Substances (RoHS) directive, which means our manufacture processes and products are strictly “lead-free” and without the hazardous substances cited in the directive.

The crossed-out wheeled bin mark symbolizes that within the European Union the product must be collected separately at the product end-of-life. This applies to your product and any peripherals marked with this symbol. Do not dispose of these products as unsorted municipal waste. Contact your local dealer for procedures for recycling this equipment.

CE Mark

This apparatus is manufactured to comply with the radio interference.

Federal Communications Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital service, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Any changes or modifications made to this equipment may void the user’s authority to operate this equipment. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device mat not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

FCC Caution:

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
- All external cables connecting to this basic unit must be shielded.
  For cables connecting to PCMCIA cards, see the option manual or installation instructions.

Disclaimer

We reserve the right to revise or remove any content in this manual at any time. We do not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of this manual. The content of this manual is subject to change without notice.

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FEATURES 1
PACKAGE CONTENT 1
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CAMERA CONFIGURATION 6

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FEATURES

1. 1/3" color CCD sensor with SONY Effio DSP
2. High resolution
3. Low light sensitivity of 0.05 Lux, 0 Lux (IR ON)
4. External alarm-in device connection
5. Customized OSD menu for camera configuration
6. IP67, suitable for outdoor use
7. Day and night features for 24-hour surveillance

PACKAGE CONTENT

Please make sure you have the following items in your sales package:

- IR Camera * 1
- Bracket * 1
- User Manual * 1

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SPECIFICATIONS*

Pick up Element	1/3" Color CCD image sensor with SONY Effio DSP
Number of Pixel	768(H)x494(V) <NTSC> / 752(H)x582(V) <PAL>
Resolution	Super High Resolution
Min. Illumination	0.05 Lux / F1.4; 0 Lux (IR ON)
S/N Ratio	More than 48dB (AGC off)
Electronic Shutter	1/60 (1/50) to 1/100,000 sec
Lens	f6.0mm / F1.4
Lens Angle	54°
IR LED	35 units
IR Effective Distance	Up to 25 meters
Color Rolling Suppress	YES
White Balance	ATW
AGC	Auto
IRIS Mode	AI / AES (Default)
IP Rating	IP67

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External Alarm Device Connection	Alarm in
Video Output	1.0 Vp-p composite, 75Ω
Startup Temperature	0˚C~40˚C
Operating Temperature	-20˚C~40˚C
Power Source (±10%)	DC12V
Current Consumption (±10%)	75mA (IR OFF), 400mA (IR ON)
Dimensions (mm)**	142(H) x 75(Φ)

* The specifications are subject to change without notice.
** Dimensional Tolerance: ± 5mm

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* The specifications are subject to change without notice.
** Dimensional Tolerance: ± 5mm

CONNECTION

1. Connect the power connector of the camera to a DC 12V regulated power supply.

NOTE: Please use a regulated DC12V power adaptor to operate this unit. The power tolerance of this unit is DC12V ± 10% (DC 10.8V ~ DC 13.2V). A power input of more than the DC 13.2V will damage this unit.

2. Connect the camera video output to the input of the DVR with a 75Ω coaxial cable.
3. (Optional) Connect to an alarm device as described in the manual of the alarm device with the "**Alarm in**" and "**GND**" wires. Then, go to DVR's menu (**ADVANCED CONFIG ➔ DETECTION ➔ ALARM**) to enable alarm detection.

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INSTALLATION

1. Use the supplied three screws to attach the bracket to wall. Drill a hole in advance on the proper position of the wall for the Power and Video Cable to pass through later.

2. Remove the Joint Lock from the bracket by turning it counterclockwise. Then, screw the Joint Lock to the backside of the camera (turn clockwise).

NOTE: There are two screw holes on the backside of the camera. Please choose the proper one which best suits your installation environment.

3. Screw the camera with the Joint Lock connected to the bracket. After that, secure the Joint Lock to fix. Then, pass the Power and Video Cable through the hole drilled in Step 1 to hide it.

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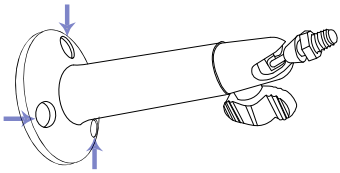

Figure 1

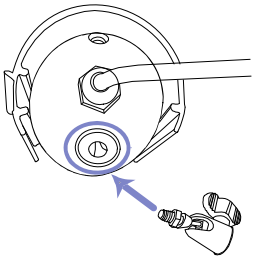

Figure 2

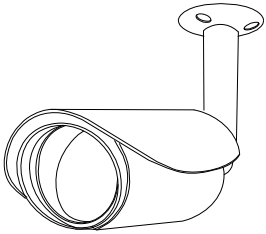

Figure 3

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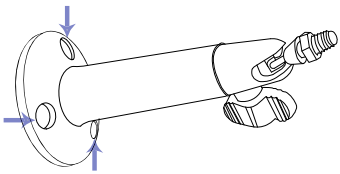

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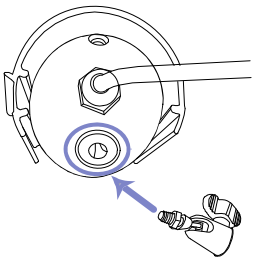

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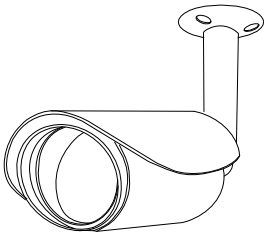

Figure 3

CAMERA CONFIGURATION

This camera has its own menu for parameter settings. To enter the menu, please connect this camera with a DCCS-enabled DVR, or used with our control box, AVK-T1, when it's connected to a non-DCCS DVR.

- **Enter camera menu**

  Connect the supplied power adapter to the camera's power jack on the rear panel and the power outlet.

  Below shows how to enter the camera menu with a DCCS-enabled DVR.

  STEP1: When the DVR is powered on, check the channel with this camera connected, and see if the DCCS connection icon is shown.

  STEP2: Enter the camera menu.

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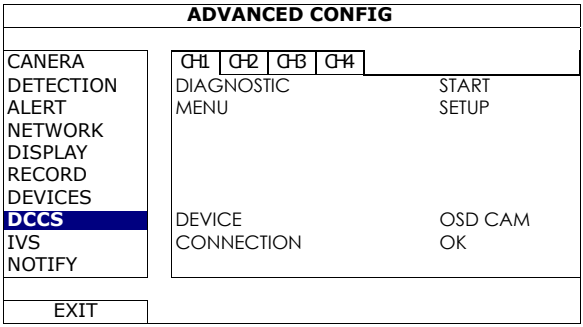
  STEP1: When the DVR is powered on, check the channel with this camera connected, and see if the DCCS connection icon is shown.

  STEP2: Enter the camera menu.

From DCCS menu

Right-click to display the DVR main menu, and select "**ADVANCED CONFIG**" ➔ "**DCCS**".



Select "**MENU**" ➔ "**SETUP**" to enter the camera menu.

- To move between each option, select "🡅" / "🡇";
- To change parameter values, select "🡄" / "🡆";
- When you see ↵ with an option, select "↵";
- To exit the menu and return to the main menu, select "X".

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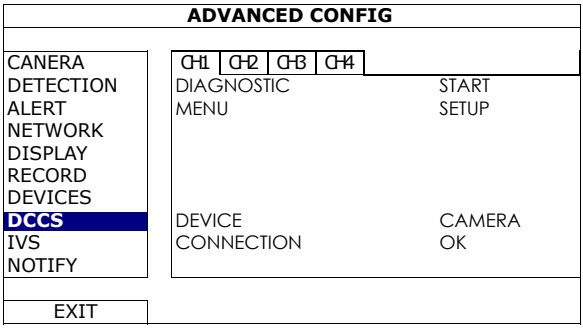
From DCCS menu

Right-click to display the DVR main menu, and select "**ADVANCED CONFIG**" ➔ "**DCCS**".



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- To exit the menu and return to the main menu, select "X".

➢ Camera menu

SUB-MENU	DESCRIPTION
SHUTTER / AGC	1. Select “AUTO” to allow the camera to act automatically when the light condition of the environment changes. 2. Select “MANUAL” to fix the shutter and AGC modes of the camera no matter how the light condition of the environment changes.
WHITE BAL	Process the current image to retain color balance over a color temperature range.
BACKLIGHT	Adjust the image to compensate for an area that is overpowered by brightness because of excessive light. “BLC” is to automatically adjust the level of the light to show more details in the dark environment. “HLC” is to mask extremely bright areas.
PICT ADJUST	Adjust the color of the pictures in, for example, brightness, contrast, sharpness and hue.
ATR	D-WDR to increase the image recognizability of the overexposed and dark areas.
PRIVACY	Mask areas that should be not visible.
DAY / NIGHT	Set the night surveillance mode to color or B/W.
NR	Reduce noise by separating luminance (Y) and chrominance (C) settings.
CAMERA ID	Set the title of the camera.
LANGUAGE	Select the language of the menu on-screen display.
CAMERA RESET	Press ↵ to restore all settings to their factory default values.

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➢ Camera menu

SUB-MENU	DESCRIPTION
SHUTTER / AGC	3. Select “AUTO” to allow the camera to act automatically when the light condition of the environment changes. 4. Select “MANUAL” to fix the shutter and AGC modes of the camera no matter how the light condition of the environment changes.
WHITE BAL	Process the current image to retain color balance over a color temperature range.
BACKLIGHT	Adjust the image to compensate for an area that is overpowered by brightness because of excessive light. “BLC” is to automatically adjust the level of the light to show more details in the dark environment. “HLC” is to mask extremely bright areas.
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➢ Camera menu tree

SUB-MENU	OPTIONS			
SHUTTER / AGC	AUTO↵	HIGH LUNINANCE	MODE	AUTO IRIS / SHUT+AUTO IRIS
			BRIGHTNESS	0 ~ 255
		LOW LUMINANCE	MODE	AGC / OFF
			BRIGHTNESS	x0.25 / x0.50 / x0.75 / x1.00
	MANUAL↵	MODE	SHUT + AGC	
		SHUTTER	1/50; 1/120; 1/250; 1/500; 1/1000; 1/2000; 1/4000; 1/10000	
		AGC	6.00 / 12.00 / 18.00 / 24.00 / 30.00 / 36.00 / 42.00 / 44.80	
WHITE BAL	ANTI CR			
	MANUAL↵	LEVEL	012 ~ 031	
	PUSH LOCK			
	ATW↵	SPEED	0 ~ 255	
		DELAY CNT	0 ~ 255	
		ATW FRAME	x0.50 / x1.00 / x1.50 / x2.00	
		ENVIRONMENT	INDOOR / OUTDOOR	

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SUB-MENU	OPTIONS			
SHUTTER / AGC	AUTO↵	HIGH LUNINANCE	MODE	AUTO IRIS / SHUT+AUTO IRIS
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WHITE BAL	ANTI CR			
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	PUSH LOCK			
	ATW↵	SPEED	0 ~ 255	
		DELAY CNT	0 ~ 255	
		ATW FRAME	x0.50 / x1.00 / x1.50 / x2.00	
		ENVIRONMENT	INDOOR / OUTDOOR	

SUB-MENU	OPTIONS			
WHITE BAL	PUSH			
	USER1↵ / USER2↵	B – GAIN / R – GAIN	0 ~ 255	
BACKLIGHT	OFF / BLC / HLC			
PICT ADJUST	↵	MIRROR	OFF / ON	
		BRIGHTNESS / CONTRAST / SHARPNESS / HUE / GAIN	0 ~ 255	
ATR	OFF			
	ON↵	LUMINANCE	LOW / MID / HIGH	
		CONTRAST	LOW / MIDLOW / MID / MIDHIGH / HIGH	
PRIVACY	OFF			
	ON↵	AREA SEL	1/4; 2/4; 3/4; 4/4	
			TOP / BOTTOM	0 ~ 288
			LEFT / RIGHT	0 ~ 370
		COLOR	1 ~ 8	
		TRANSP	0.00 / 0.50 / 0.75 / 1.00	
		MOSAIC	ON / OFF	

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SUB-MENU	OPTIONS			
WHITE BAL	PUSH			
	USER1↵ / USER2↵	B – GAIN / R – GAIN	0 ~ 255	
BACKLIGHT	OFF / BLC / HLC			
PICT ADJUST	↵	MIRROR	OFF / ON	
		BRIGHTNESS / CONTRAST / SHARPNESS / HUE / GAIN	0 ~ 255	
ATR	OFF			
	ON↵	LUMINANCE	LOW / MID / HIGH	
		CONTRAST	LOW / MIDLOW / MID / MIDHIGH / HIGH	
PRIVACY	OFF			
	ON↵	AREA SEL	1/4; 2/4; 3/4; 4/4	
			TOP / BOTTOM	0 ~ 288
			LEFT / RIGHT	0 ~ 370
		COLOR	1 ~ 8	
		TRANSP	0.00 / 0.50 / 0.75 / 1.00	
		MOSAIC	ON / OFF	

SUB-MENU	OPTIONS		
DAY/NIGHT	COLOR		
	B/W↵	BURST	ON / OFF
	AUTO↵	BURST	ON / OFF
		DELAY CNT	0 ~ 255
		DAY-> NIGHT	0 ~ 255
		NIGHT-> DAY	0 ~ 255
NR	↵	NR MODE	Y/C; Y; C; OFF
		Y LEVEL	
		C LEVEL	
CAMERA ID	OFF / ON↵		
LANGUAGE	ENGLISH / 日本語 / DEUTSCH / FRANCAIS / РУССКИЙ / PORTUGUÊS / ESPAÑOL		
CAMERA RESET			

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SUB-MENU	OPTIONS		
DAY/NIGHT	COLOR		
	B/W↵	BURST	ON / OFF
	AUTO↵	BURST	ON / OFF
		DELAY CNT	0 ~ 255
		DAY-> NIGHT	0 ~ 255
		NIGHT-> DAY	0 ~ 255
NR	↵	NR MODE	Y/C; Y; C; OFF
		Y LEVEL	
		C LEVEL	
CAMERA ID	OFF / ON↵		
LANGUAGE	ENGLISH / 日本語 / DEUTSCH / FRANCAIS / РУССКИЙ / PORTUGUÊS / ESPAÑOL		
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